

WHAT IS CLAIMED IS:

1. A processing method for a high pressure gas container comprising the step of polishing the inner surface of a high pressure gas container mainly made of iron, which has had a pressure test by hydraulic pressure, by 5 to 100 μm thickness on average such that the value of dividing the area of the $\text{Si}2\text{s}$ peak by the area of the $\text{Fe}2\text{p}_{3/2}$ peak in the X-ray photoelectron spectrum of the container inner surface is 0.3 or less.

2. The processing method according to claim 1, wherein at least the final polishing is conducted with a polishing agent having a Si content of 10 wt% or less.

3. A halogen containing gas filled in a high pressure gas container processed by polishing the inner surface of a high pressure gas container mainly made of iron, which has had a pressure test by hydraulic pressure, by 5 to 100 μm thickness on average such that the value of dividing the area of the $\text{Si}2\text{s}$ peak by the area of the $\text{Fe}2\text{p}_{3/2}$ peak in the X-ray photoelectron spectrum of the container inner surface is 0.3 or less.

4. The halogen containing gas filled in a high pressure gas container according to claim 3, wherein the silicon halide content of the gas is 0.3 ppm or less.

5. A method for processing the inner surface of a fluorine containing gas container mainly made of iron, which has had a pressure test by hydraulic pressure, comprising the step of conducting at least the final polishing with a polishing agent

having a Si content of 10 wt% or less.